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SERIAL NO. 10/031,088

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Form PTO-1449 U.S. DEPARTMENT OF COMMERCE (Rev. 7-80) PATENT AND TRADEMARK OFFICE	ATTORNEY DOCKET NO.: 14114.0342U2	SERIAL NO. 10/031,088
	APPLICANT: Fields et al.	
	FILING DATE: January 14, 2002	GROUP: Unassigned

## U.S. PATENT DOCUMENTS

EXAMINER INITIALS		DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
Q	A1	5,426,039	06/20/95	Wallace et al.	435	91.2	September 8, 1993
↓	A2	4,683,202	07/28/87	Mullis et al.	435	91	October 25, 1985
↓	A3	4,391,904	07/05/83	Litman et al.	435	7	April 17, 1981

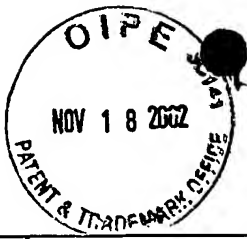
## FOREIGN PATENT DOCUMENTS

10	A4	WO 97/40147	10/30/97	CDC (PCT)			
↓	A5	WO 89/06658	07/27/89	University of North Carolina (PCT)			
↓	A6	WO 01/05243	01/25/01	AMPC, Inc. (PCT)			

## OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

Q	A7	Barringer et al., "Blunt-end and single-strand ligations by <i>Escherichia coli</i> ligase: influence on an in vitro amplification scheme," <i>Gene</i> 89:117-122 (1990)
↓	A8	Beaucage and Caruthers, "Deoxynucleoside Phosphoramidites -- A New Class of Key Intermediates for Deoxypolynucleotide Synthesis," <i>Tetrahedron Letts.</i> 22(20):1859-1862 (1981)
	A9	Chang et al., "Antigenic Heterogeneity of the Hepatitis C Virus NS4 Protein as Modeled with Synthetic Peptides," <i>Virology</i> 257:177-190 (1999)
	A10	Gillam and Smith, "Site-Specific Mutagenesis Using Synthetic Oligodeoxyribonucleotide Primers: I. Optimum Conditions and minimum Oligodeoxyribonucleotide Length," <i>Gene</i> 8:81-97 (1979)
	A11	Guatelli et al., "Isothermal, <i>in vitro</i> amplification of nucleic acids by a multienzyme reaction modeled after retroviral replication," <i>Proc. Natl. Acad. Sci. USA</i> 87:1874-1878 (March 1990)
	A12	Jia et al., "Host Antibody Response to Viral Structural and Nonstructural Proteins after Hepatitis A Virus Infection," <i>J. Infect. Diseases</i> 165:273-280 (1992)
	A13	Khudyakov et al., "Antigenic Epitopes of the Hepatitis A Virus Polyprotein," <i>Virology</i> 260(2):260-272 (1999)
	A14	Kusov et al., "Synthetic peptide 62-75 VP3 of hepatitis A virus induces virus-binding antibodies," <i>Vopr. Virusol.</i> 36(2):114-117 (1991) (Abstract)
	A15	Kwoh et al., "Transcription-based amplification system and detection of amplified human immunodeficiency virus type 1 with a bead-based sandwich hybridization format," <i>Proc. Natl. Acad. Sci. USA</i> 86:1173-1177 (February 1989)
	A16	Landegren et al., "A Ligase-Mediated Gene Detection Technique," <i>Science</i> 241:1077-1080 (August 26, 1988)
	A17	Langer, "New Methods of Drug Delivery," <i>Science</i> 249:1527-1533 (September 28, 1990)
↓	A18	Lomeli et al., "Quantitative Assays Based on the Use of Replicable Hybridization Probes," <i>Clin. Chem.</i> 35(9):1826-1831 (1989)

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A19	Maxam and Gilbert, "Sequencing End-Labeled DNA with Base-Specific Chemical Cleavages," <i>Methods Enzymol.</i> 65(1):499-560 (1980)
A20	Merrifield, "Solid Phase Peptide Synthesis. I. The Synthesis of a Tetrapeptide," <i>J. Am. Chem. Soc.</i> 85:2149-2154 (July 20, 1963)
A21	Needham-VanDevanter et al., "Characterization of an adduct between CC-1065 and a defined oligodeoxynucleotide duplex," <i>Nucl. Acid. Res.</i> 12(15):6159-6168 (1984)
A22	Needleman and Wunsch, "A General Method Applicable to the Search for Similarities in the Amino Acid Sequence of Two Proteins," <i>J. Mol. Biol.</i> 48:443-453 (1970)
A23	Pearson and Regnier, "High-Performance Anion-Exchange Chromatography of Oligonucleotides," <i>J. Chrom.</i> 255:137-149 (1983)
A24	Pearson and Lipman, "Improved tools for biological sequence comparison," <i>Proc. Natl. Acad. Sci. USA</i> 85:2444-2448 (April 1988)
A25	Ping et al., "Antigenic Structure of Human Hepatitis A Virus Defined by Analysis of Escape Mutants Selected against Murine Monoclonal Antibodies," <i>J. Virol.</i> 66(4):2208-2216 (1992)
A26	Roberts et al., "Generation of an antibody with enhanced affinity and specificity for its antigen by protein engineering," <i>Nature</i> 328:731-734 (August 20, 1987)
A27	Robertson et al., "Antibody Response to Nonstructural Proteins of Hepatitis A Virus Following Infection," <i>J. Med. Virol.</i> 40:76-82 (1993)
A28	Robertson et al., "Serological approaches to distinguish immune response to hepatitis A vaccine and natural infection," <i>Vaccine</i> 10(Supp. 1):S106-S109 (1992)
A29	Smith and Waterman, "Comparison of Biosequences," <i>Adv. Appl. Math.</i> 2:482-489 (1981)
A30	Sooknanan and Malek, "NASBA: A detection and amplification system uniquely suited for RNA," <i>Biotechnology</i> 13:563-564 (June 1995)
A31	Van Brunt, "Amplifying Genes: PCR and Its Alternatives," <i>Bio/Technology</i> 8:291-294 (April 1990)
A32	Wolff et al., "Direct Gene Transfer into Mouse Muscle in Vivo," <i>Science</i> 247:1465-1468 (March 1990)
A33	Wu and Wallace, "The Ligation Amplification Reaction (LAR)—Amplification of Specific DNA Sequences Using Sequential Rounds of Template-Dependent Ligation," <i>Genomics</i> 4:560-569 (1989)

EXAMINER:

DATE CONSIDERED:

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.